

### **Molarity and Dilution, Practice Problems**

- 1) How many grams of potassium carbonate are needed to make 200. mL of a 2.50 M solution?
- 2) What is the concentration of a 450. mL solution that contains 234 grams of iron (II) chloride?
- 3) How many liters of 0.880 M solution can be made with 25.5 grams of lithium fluoride?
- 4) How many liters of 0.75 M solution can be made using 75 grams of lead (II) oxide?
- 5) If I have 340 mL of a 0.5 M NaBr solution, what will the concentration be if I add 560 mL more water to it?
- 6) If I leave 750 mL of 0.50 M sodium chloride solution uncovered on a windowsill and 150 mL of the solvent evaporates, what will the new concentration of the sodium chloride solution be?
- 7) What is the molarity of a solution of ammonium chloride prepared by diluting 50.0 mL of a 3.79 M stock solution to 2.00 L?
- 8) Describe how to prepare 1.00 L of 0.495 M solution of urea,  $\text{NH}_2\text{CONH}_2$ , starting with a 3.07 M stock solution?